



Additional chart coverage may be found in CATP2, Catalog of Nautical Charts

SECTOR 7 — CHART INFORMATION

SECTOR 7

WEST COAST OF FINLAND—ISOKARI TO STROMMINGSBADAN

Plan.—This sector describes the W coast of Finland and the contiguous off-lying area in the Gulf of Bothnia between Isokari (60°43'N., 21°01'E.), at the N side of the Åland Islands, and Strommingsbadan, in the vicinity of the S approach to Norra Kvarken. The descriptive sequence is N.

General Remarks

7.1 The Finnish coast is low and difficult to make out from seaward. It is fronted by numerous islands, rocks, and shoals extending as far as 12 miles offshore. It should be noted that this coast has not been completely surveyed, and that dangers in addition to those shown on the chart may exist. Vessels lacking local knowledge should exercise the appropriate caution.

Winds—Weather.—The great volume of water entering the Gulf of Bothnia from many rivers causes a uniform S surface movement during calm weather. This prevailing current in the gulf usually causes vessels from Sodra Kvarken to Norra Kvarken to be set E of their course towards the dangers off the Finnish coast.

Along the Finnish coast, there is a current setting to the N and during the autumn a branch of the N current sets W of the Åland Islands and then toward the Finnish shore. Under normal conditions the current has a velocity of not more than 1 to 2 knots. The currents in the Gulf of Bothnia have seldom been observed to exceed 1.5 knots.

A dominant factor in the movements of the current is the wind direction, which can cause great irregularities in the pattern of the currents in these waters. The currents are not only affected by the local winds, but also from those of other localities. A change in the current often precedes the striking of a storm by several hours. During gales the current generally sets with the wind, from 1 to 2 knots in the open sea and from 3 to 4 knots near shore.

The tidal range in these waters is of little consequence, but considerable change in the water level may be caused by strong winds, atmospheric pressure, and the seasonal amount of water released by the rivers. A combination of these factors raises or lowers the water in the Gulf of Bothnia, from the mean water level, by as much as 0.1m, although at the heads of the inlets it may be much more under exceptional circumstances. For example, at Haparanda, located at the head of the gulf, the level may change by up to 1.5m.

Depths—Limitations.—The coast between Isokari (60°43'N., 21°01'E.) and Sappi (61°29'N., 21°21'E.), about 45 miles NNE, is almost entirely fronted by foul ground, small islands, islets, rocks, and shoals. The depths are uneven and vessels operating within the 40m curve risk the possibility of encountering unsurveyed dangers in some localities. This curve lies as far as 15 miles offshore in places.

The low coast between Sappi and Kasko (62°23'N., 21°14'E.), about 54 miles N, has foul ground extending as far

as 10 miles from the mainland. Numerous islands and islets also front the shore. The depths are uneven and vessels operating between Sappi and Kasko are also advised to stay, as nearly as possible, in depths of not less than 40m.

Between Kasko and Strommingsbadan (62°59'N., 20°45'E.), the groups of islets and shoals fronting the coast become wider, with the outermost lying as far as 18 miles from the mainland. The coast of the mainland is low, wooded, and appears to passing vessels to be farther away than it really is. The depths are irregular off this part of the coast and the charted soundings too scattered to be relied upon during periods of low visibility. In this area, vessels are advised to stay outside the 40m curve for safe navigation.

Several inshore routes lead between the dangers fronting the mainland coast. However, these channels, which are mostly narrow and tortuous, are used only by shallow draft vessels with local knowledge.

Pilotage.—See [paragraph 1.1](#) and [paragraph 4.1](#) for information concerning pilotage and VTS systems in the vicinity of Isokari, the Åland Islands, and the Saaristomeri area, including the approaches to Uusikaupunki.

Regulations.—See [paragraph 7.13](#) for information concerning the West Coast Vessel Traffic Service (VTS) system, which operates off the SW coast of Finland between Rauman M-jakka Light (61°09'N., 21°10'E.) and Kaijakari (61°37'N., 21°22'E.).

See [paragraph 10.1](#) for information concerning the Bothnia Vessel Traffic Service (VTS) system, which operates off the NW coast of Finland. This system is mandatory and includes the routes leading to Kasko (Kaskinen) and Kristinestad (Kristinankaupunki).

See [paragraph 1.1](#) for regulations regarding restricted areas and semi-restricted areas in Finnish waters.

Caution.—During the winter, many buoys are removed while others may be damaged or break adrift.

Numerous logs may be found adrift at all times of the year in the coastal waters described within this sector.

Areas dangerous due to mines laid during World War II exist within these waters. There is little risk for surface navigation but risk of danger in these areas still exists when anchoring or carrying out any seabed activities.

Isokari to Strommingsbadan

7.2 Isokari (60°43'N., 21°01'E.) is an island lying about 12 miles W of Uusikaupunki. The pilot station, a yellow one-story building, is situated on the E side of the island.

A reef extends about 0.5 mile S from the S side of the island. Santkari, an islet, is located on this reef and is marked by a beacon. Foul ground, on which several above-water rocks lie, extends between 0.3 mile and 2.5 miles NW from the NW side of the island.

A main light (rear range) is shown from a prominent tower, 37m high, standing on the island.



Isokari Light

Sandback (60°46'N., 20°45'E.), a rock awash, is the outermost danger in this vicinity. It lies on a bank about 8.5 miles WNW of Isokari. A main light, equipped with a racon, is shown from a tower, 8m high and surmounted by a helicopter platform, standing on the rock.



Sandback Light

A shoal bank, with a least depth of 6.8m, extends 1.5 miles NW from the light and is marked by a buoy.

Numerous dangers, which extend up to about 10 miles seaward, front the mainland coast in vicinity of the approaches to Uusikaupunki and Rauma. Only the outermost are described below.

Merikivi, a detached shoal with a least depth of 7.8m, lies about 2.5 miles S of Sandback Light. Etela Sandback, a rock 0.6m high, lies about 1 mile N of this rock and is fringed by shoal water.

Melanderinmatala, a rocky shoal with a least depth of 6.8m, lies about 4 miles SE of Sandback. Between the two are several shoals with depths of 2.5 to 8.8m.

Ljungberginkivi, with a depth of 6.5m, lies 2.3 miles W of Isokari. A light is shown from a structure standing on the N side of this shoal.

Ahlstedtinmatala, with a depth of 7.8m, lies 4 miles ENE of Sandback Light and is marked by a buoy.

An isolated shoal, with a depth of 9.6m, lies 4.5 miles NE of Sandback Light.

7.3 Vekara (60°51'N., 21°01'E.), an island surrounded by shoals, lies 7.5 miles N of Isokari. A beacon stands on this island but it is reported (2000) to be totally obscured by trees.



Vekara Beacon

Sammo (60°51'N., 21°06'E.), an islet fronted by shoals, lies 2.3 miles E of Vekara. A light is shown from a framework structure, 8m high, standing on this islet.

Kajakulma Light (61°00'N., 21°11'E.), equipped with a racon, is shown from a tower, 6m high, standing on an islet lying close N of a small island, about 10 miles NNE of Vekara.



Kajakulma Light

A chain of islets, rocks, and shoals, which may best be seen on the local chart, extends between Vekara and this Kajakulma Light.

Hylkkari Light (60°57'N., 21°10'E.) is shown from a tower, 6m high, standing on the NW side of a small island, 2.7 miles SSW of Kajakulma Light. The island is fronted by shoal banks on its NW, N, and E sides.

7.4 Lyokki Tower (60°56'N., 21°08'E.), a prominent conical structure 16m high, stands on one of a group of small islets lying 1.4 miles SSW of Hylkkari Light.



Lyokki Tower

Harmaatietot (Harmaatletot), consisting of a number of islets lying on an extensive area of rocks and shoals, is centered 2.3 miles SSW of Lyokki Tower.

Aukkomatala, an isolated shoal with a depth of 6.5m, lies about 3.2 miles NW of Lyokki Tower.

Suomenkari, one of the outermost dangers in this area, has a depth of 7.8m. This isolated shoal lies about 6 miles WNW of Lyokki Tower and 3 miles W Aukkomatala.

Karlssoninmatala, the northwesternmost of a group of three shoals, is one of the outermost dangers in this area. This shoal has a depth of 9m and lies about 5.5 miles W of Kajakulma Light. Karlinmatala, with a depth of 5.3, and Jonssoninmatala, with a depth of 1m, lie 0.4 mile S and 1 mile ESE, respectively, of Karlssoninmatala.

A detached shoal, with a depth of 7.8m, lies about 1 mile NNW of Kajakulma Light and is marked by a buoy. It is located at the W end of Vanhanpudanmatala, a chain of dangers which extends about 3 miles WNW from the mainland.

A detached shoal, with a depth of 8.5m, lies about 1.9 miles NW of Kajakulma Light and is marked by a buoy. It is located at the N end of a chain of dangers extending about 2 miles S.

7.5 Laitakari Light (61°03'N., 21°13'E.), a fishing light, is occasionally shown from a framework structure, 8m high, standing on the E side of an islet. A framework beacon, 5m high, is situated close W of the light.

A detached shoal, with a depth of 7.1m, lies about 3.5 miles NW of Kajakulma Light and is marked by a buoy. This shoal is located at the outer end of a group of dangers extending about 3 miles W from Laitakari Light. A beacon stands on an above-water rock lying in this group, about 1.2 miles W of Laitakari Light.

A detached shoal, with a depth of 5m, lies about 1.8 miles WNW of Laitakari Light and is marked by a buoy. Another

detached shoal, with a depth of 9.3m, lies about 2.7 miles NW of Laitakari Light.

Rihtniemi Light (61°05'N., 21°18'E.), a rear range light, is shown from a rectangular structure standing on the NW side of a mainland peninsula, 3.4 miles NE of Laitakari Light.

Rauman Majakka Light (61°09'N., 21°10'E.), equipped with a racon, is shown from a tower, surmounted by a helicopter platform, standing on Outomatala, an isolated shoal lying 5.5 miles NW of Rihtniemi Light.

Reilander, with a depth of 6.5m, lies 2.4 miles SSW of Rauman Majakka Light, near the W end of a chain of shoals extending about 5.5 miles WNW from the vicinity of Rihtniemi Light.

Sextantinmatala (61°07'N., 21°05'E.), a rocky patch with a depth of 8.5m, lies 3.2 miles SW of Rauman Majakka Light and 1.4 miles WSW of Reilander. This detached shoal is the outermost danger in this area.

7.6 Kylmapihlaja Light (61°09'N., 21°18'E.) is shown from a prominent tower on a dwelling, 32m high, standing on a small island, about 4.2 miles E of Rauman Majakka Light.



Kylmapihlaja Light

Santakari Tower (61°07'N., 21°17'E.), situated on an islet about 1.4 miles NNW of Rihtniemi Light, is 19m high and prominent. It consists of a red wooden hexagonal tower with a pointed roof topped by a vane.

Nurmes Light (61°12'N., 21°20'E.) is shown from a prominent framework tower, 12m high, standing at the W side of a large island, about 3 miles NNE of Kylmapihlaja Light.

Nurmeksen Matala, an extensive shoal with shallow rocks, extends 3 miles WNW and 3.2 miles NW from the vicinity of Nurmes Light. The outer edges of this shoal are marked by buoys.

Caution.—An ammunition dumping ground area, the limits of which may best be seen on the chart, lies centered 21 miles NW of Sandback Light.

A submarine cable, which may best be seen on the chart, extends seaward from the mainland in the vicinity of Rihtniemi Light.

Approaches to Uusikaupunki and Rauma

7.7 The coastal route leads 23 miles NNE from N of Sandback Light (60°46'N., 20°45'E.) to WNW of Rauman Majakka Light (61°09'N., 21°10'E.).

The main approach route from W to Uusikaupunki, which is authorized for drafts up to 10m, leads SE from seaward and passes NE of Sandback (60°46'N., 20°45'E.) and SW of Isokari (60°43'N., 21°01'E.). From a position about 1 mile SSE of Isokari rear range light, the route continues in a NE direction for 6.5 miles to a position close SW of Hylkiletto (60°46'N., 21°13'E.). It then leads 1.2 miles N, 0.8 mile NE, 2 miles ENE, and about 1 mile SE through a buoyed channel to the harbor entrance fairways.

An alternate approach route from W leads about 10 miles E from a position 3.7 miles SSW of Sandback Light. It passes S of Sandback and Isokari. This route is authorized for drafts up to 8m and joins the main Uusikaupunki approach channel.

The main approach route from N to Uusikaupunki, which is authorized for drafts up to 9m, leads SE from seaward to a position about 0.4 mile NW of Kajakulma Light (61°00'N., 21°11'E.). It then continues for about 20 miles in a S direction, passing between the numerous offshore islets and shoals, to join the main Uusikaupunki approach channel close NE of Pohjamatala (60°45'N., 21°11'E.).

There are two main approach routes leading from seaward to Rauma. The S route, which is known as the Rauma Channel, is authorized for drafts up to 10m. It leads SE and passes about 1.2 miles SW of Rauman Majakka Light (61°09'N., 21°10'E.) and NE of Reilander. From a position about 2 miles NW of Rihtniemi Light (61°05'N., 21°18'E.), the route then leads about 1.5 miles ESE, 3 miles NE, and 1 mile NNE through a buoyed channel to the harbor.

The N route, which is known as the Valkeakari Channel, is authorized for drafts up to 7m. From a position about 1.5 miles NE of Rauman Majakka Light (61°09'N., 21°10'E.), this route initially leads 1.8 miles NE to a position about 2.2 miles NW of Kylmapihlaja Light (61°09'N., 21°18'E.). It then leads 3 miles ESE and 0.5 mile SSE to pass close E of the island of Valkeakari. This route, which is only partly buoyed, continues SE for about 2 miles to the harbor.

An offshore track, which is authorized for drafts up to 5.5m, connects the main N approach route to Uusikaupunki with the two main approach routes for Rauma. From a position 1.6 miles NW of Kajakulma Light, the track leads 2.3 miles N and passes 2 miles W of Laitakari Fishing Light (61°03'N., 21°13'E.). It then continues 4.5 miles NNE and joins the two main routes in the vicinity of Rauman Majakka Light.

Several secondary channels, which are available for vessels with light drafts and local knowledge, branch off the main approach routes and may best be seen on the local charts.

Uusikaupunki (60°48'N., 21°24'E.)

World Port Index No. 27790

7.8 Uusikaupunki lies about 12 miles ENE of Isokari. The port area is composed of the island of Hanko and the shore fronting the W side of the town. The island is joined to the town by a causeway.

Ice.—The harbor is kept open all year with icebreaker assistance.

During the winter, if the ice situation is difficult in the Gulf of Bothnia, the traffic proceeds through Sararistomeri and via Uto.

Depths—Limitations.—The main approach route from seaward is authorized for drafts up to 10m (see paragraph 7.7).

The inner harbor has three quays. Hepokari Quay, with a ro-ro berth at the S side, is 90m long and has a depth of 7m alongside; Telakka Quay is 150m long and has a depth of 5m alongside; and Saunasilta Quay, used by coasters, is 60m long and has a depth of 3.5m alongside.

The buoyed channel leading to the inner harbor is authorized for drafts up to 7m.

The Esso Harbor Quay is 40m long and has a depth of 5m alongside. The buoyed channel leading to this harbor is authorized for drafts up to 5m.

Kemira Harbor Quay is 340m long and has a depth of 10m alongside. The harbor channel leading to this quay is authorized for drafts up to 10m.

There are facilities for passenger, general cargo, LPG, bulk, chemical, timber, and ro-ro vessels. Vessels up to 40,000 dwt, 200m in length, and 10m draft can be accommodated in the port.

Aspect.—The main approach channels are indicated by directional sector lights and lighted ranges, and are marked by buoys and beacons. A conspicuous television mast stands in the vicinity of the town.

Pilotage.—Pilotage is compulsory. Pilots are provided by the Turku pilot station. Vessels should send a request for pilotage and an ETA at least 12 hours in advance. Pilots may be contacted by VHF and board about 3 miles WNW of Isokari.

Regulations.—Vessels with drafts greater than 8m must not exceed a speed of 7 knots in certain parts of the main approach route.

See [paragraph 4.1](#) for information concerning VTS systems in the vicinity of Isokari, the Aland Islands, and the Saaristomeri area, including the approaches to Uusikaupunki.

Anchorage.—Good sheltered anchorage is available, in depths of 7m, clay, close SW of Hepokari Quay.

Caution.—During N and E winds, the water level can fall about 0.4m below normal, which may sometimes delay deeply loaded vessels reaching the port.

It is reported that submarine pipelines lie in the vicinity of the channel leading to Esso Harbor Quay.

The approach channels are well-marked, but care should be exercised as they are fringed by dangers, and are tortuous in places.



Courtesy of the Port of Rauma

Rauma Harbor



Courtesy of the Port of Rauma

Rauma

Rauma (61°08'N., 21°30'E.)

World Port Index No. 27780

7.9 Rauma, situated 20 miles NNE of Uusikaupunki, lies at the head of a bight, which is encumbered by islets and reefs. The port exports paper products and imports oil, coal, and grains.

Ice.—The port is kept open all year with the assistance of an icebreaker service. Since the adjacent sea area is wide and the archipelago protects the harbor from pack ice belts, it is not too difficult to keep the port open.

Tides—Currents.—The tidal range is about 0.5m.

Depths—Limitations.—Rauma Channel, the main approach route from seaward, is authorized for drafts up to 10m (see [paragraph 7.7](#)).

The port consists of inlets lying on the N and S sides of the Iso-Hakuni peninsula. The N inlet provides access to a shipyard and a small craft harbor.

The principal commercial berths are situated along the S side of the peninsula, within a basin at its W end, and within a basin at its SE end.

Suoja Coal Quay, at the S side of the SE basin, is 110m long and has a depth of 5.7m alongside. Chemical Berth K1 and

Chemical Berth K2, at the N side, are 90m and 130m long, respectively, and have depths of 5.1m and 7m alongside.

Oil Quay, at the SW end of the SE basin, is 200m long and has a depth of 9.1m alongside.

Laitsaari Quay, at the S side of the peninsula, is 285m long and has a depth of 9m alongside. Central Quay, close W of Laitsaari Quay, is 410m long and has depths of 6.1 to 6.9m alongside.

Six ro-ro berths are situated alongside the S side of the peninsula. They are 130 to 225m long and have depths of 6.2 to 10m alongside.

Petajas Bulk Quay, at the N side of the W basin, is 314m long and has a depth of 11m alongside. Container Quay, at the S side, is 130m long and has a depth of 10m alongside.

It is reported (2001) that the Container Quay is being extended and two additional ro-ro berths are under construction at the W end of the peninsula.

There are facilities for container, ro-ro, general cargo, bulk, chemical, oil, and timber product vessels. Tankers up to 180m in length and 8.8m draft can be handled. Cargo vessels are limited only by the authorized approach draft.

Aspect.—The main approach channels are indicated by directional sector lights and lighted ranges, and are marked by buoys and beacons. A prominent silo stands in the N part of the harbor.

Pilotage.—Vessels should send a request for pilotage and an ETA at least 12 hours in advance of arrival. For information required to be included in the message, see Pilotage under Mantyluoto ([paragraph 7.13](#)).

Pilots can be contacted on VHF channel 13 and board about 2.5 miles NW or 4 miles WSW of Kylmapihlaja Light (61°08.7'N., 21°18.4'E.).

Regulations.—The Rauma Sector of the West Coast Vessel Traffic Service (VTS) extends S from latitude 61°22'N to the vicinity of Rauman Majakka Light (61°09'N., 21°10'E.) and includes the harbor of Rauma. For details of this VTS system, see [paragraph 7.13](#)

A designated restricted area, which may best be seen on the local chart, covers the approaches to the port. Vessels must remain within the authorized route channel in this area.

Caution.—A submarine pipeline and a submarine cable, which may best be seen on the chart, extend across the channel from the NW end of the Iso-Hakuni peninsula.

A designated nature reserve area, within which numerous restrictions apply, surrounds the island of Hylkikarta (61°07'N., 21°21'E.) in the S approach to the port.

7.10 The coast between Rauma and Mantyluoto, about 29 miles N, is fronted by numerous islands, rocks, and shoals, which may best be seen on the chart. These dangers extend up to about 8 miles seaward in places. Only the outer dangers and significant landmarks are described below.

Kalla Light (61°16'N., 21°21'E.) is shown from a framework tower, 10m high, standing on the NW side of an islet lying 4.5 miles N of Nurmes Light (61°12'N., 21°20'E.).

Ulko-Royska, with a least depth of 5m, lies about 1.8 miles W of Kalla Light. This detached shoal is marked by a buoy and is the outermost danger in this vicinity.

Olkiluoto (61°14'N., 21°27'E.), a small craft harbor, is situated on the S side of the W part of a peninsula. An approach

route, authorized for drafts up to 5m, leads from a position about 4 miles SW of Kalla Light. This route, which is marked by buoys and range beacons, leads ENE and ESE for about 6.5 miles to the harbor. Local knowledge is required.

Eurajoki (61°15'N., 21°30'E.), a small craft harbor, is situated on the N side of a peninsula. An approach route, authorized for drafts up to 6m, leads from a position about 2 miles NW of Kalla Light. This route, which is marked by buoys and range beacons, leads SE and ESE for about 5.5 miles to the harbor. Local knowledge is required.

Pietari (61°21'N., 21°23'E.), a small islet, lies 4.5 mile N of Kalla Light. A conspicuous beacon, consisting of poles with red and white supports forming a pyramid 18m high, stands on this islet.

7.11 Sappi Light (61°29'N., 21°21'E.), a main light, is shown from a prominent tower, 31m high, standing on the NW side of an island lying in the S approaches to Mantyluoto, about 12.5 miles N of Kalla Light.



Sappi Light

An extensive shoal area, with depths of less 10m, extends up to about 3.5 miles W and 5.5 miles SW of Sappi Light. The outer edge of this shoal area is marked by a buoy. An area, with depths less than 20m, extends up to about 5 miles WNW of the light and is also marked by a buoy.

Kaijakari Light (61°37'N., 21°22'E.) is shown from a framework tower, 16m high, standing on an islet in the N approaches to Mantyluoto, 8.5 miles N of Sappi Light.

Kupeli Light (61°38'N., 21°20'E.), equipped with a racon, is shown from a mast, 7m high, standing 1.3 miles NNW of Kaijakari Light. Shoals extend between these lights and are marked on the seaward side by buoys.

Sumparbadar, a group of shoals with depths of less than 10m, extends up to about 4 miles NW of Kupeli Light.

7.12 Morris Lighted Beacon (61°35'N., 21°25'E.), equipped with a racon, is shown from a mast, 10m high, stand-

ing in the S approach to Mantyluoto, 2.6 miles SSE of Kaijakari Light.

Porin Majakka Light (61°42'N., 21°14'E.), equipped with a racon, is shown from a prominent structure with a wind generator, 18m high, standing 5.2 miles NW of Kupeli Light.



Porin Majakka Light

Caution.—A submarine cable, which may best be seen on the chart, extends seaward from the vicinity of Kalla Light.

Mantyluoto (61°36'N., 21°29'E.)

[World Port Index No. 27750](#)

7.13 Mantyluoto (Pori), lying 55 miles NNE of Isokari, fronts the N side of an island of the same name. It is the outport for Pori, which is situated 10 miles SE along the shallow estuary of the Kokemaenjoki. A fishing harbor fronts the SE end of Reposaari, an island lying close NW of Mantyluoto. Tahkoluoto, the deep-water terminal for Pori, lies 3 miles NW of Mantyluoto, at the NW extremity of Reposaari.

Winds—Weather.—The prevailing winds are from the SW.

Ice.—The harbor is closed by ice for only a short time in winter, and in very favorable winters it is never closed. This is because of the area of open sea on one side and the currents setting up in the inner side by the discharge of the Kokemaenjoki (River Kumo) at the head of the bight. Icebreakers are available if required.

Depths—Limitations.—Kallo, an islet, lies close off the NW extremity of the island of Mantyluoto to which it is connected by a causeway. Kolmikulma, a shoal bank with a least depth of 0.8m, lies in the approach, about 0.5 mile W of the N end of Kallo. The harbor entrance lies between the heads of two breakwaters, which extend about 400m N from Kallo and about 500m S from the S end of Reposaari.

The main approach channel, which is authorized for drafts up to 10m, leads ENE for 3.5 miles and NE for 2 miles from



Courtesy of Port of Mäntyluoto

Mäntyluoto from E

the pilot boarding place. It passes close SE of Morris Lighted Beacon and close SE of Kolmikulma shoal bank. An entrance fairway then continues NE between the breakwaters and into the harbor.

An alternate approach channel, which is authorized for drafts up to 6.5m, leads E and SE from a position 1.8 miles SW of Kaijakari Light. It passes NE of Kolmikulma shoal bank and then joins the main approach channel.

The river has a depth of 2m; Pori is only used by recreational craft. The harbor at Reposaari has 250m of berthage, with depths up to 4.5m alongside, and is used by fishing vessels with drafts up to 3.9m.

The harbor at Mäntyluoto provides 2,000m of main quayage, with depths of 6.5 to 11.2m alongside. There are facilities for general cargo, ro-ro, container, bulk, and timber vessels. Vessels up to 10m draft can be handled.

Tahkoluoto(61°38'N., 21°24'E.) ([World Port Index No. 27755](#)), the deep-water terminal, can be approached by two channels. The N channel, which is authorized for drafts up to 15.3m, leads SE for 7 miles from a position about 1.5 miles NW of Porin Majakka Light. It passes close NE of the latter light and leads to the turning basin at the N side of the harbor.

The S channel, which is authorized for drafts up to 10m, leads 2 miles in a NE direction from a position about 1.5 miles SW of Kupeli Light. It passes close SE of the latter light and leads to the turning basin.

There are two berthing complexes at Tahkoluoto. The Oil Terminal, with an L-shaped pier, is situated at the NE side of the harbor. It has a berth, 145m long, with a depth of 11.5m alongside and can handle vessels with drafts up to 10m. A bulk quay is situated close W of the oil berth on the inside of a breakwater. It has a berth, 120m long, with a depth of 11.5m alongside.

The Coal Terminal is situated at the W side of the harbor. It has a quay, 450m long, with a depth of 17.5m alongside. Vessels up to 120,000 dwt and 15.3m draft can be handled.

Aspect.—The approach channels are indicated by lighted ranges and marked by buoys, which may best be seen on the chart.

A prominent chimney stands on the NE side of Reposaari, about 1 mile NNW of the root of the breakwater. A prominent radio mast stands on the S side of Reposaari, about 0.2 mile NW of the root of the breakwater. A conspicuous water tower,

64m high, is situated about 2 miles SE of Mäntyluoto. A shipyard, which is used for the construction of offshore platforms, is situated at the NE side of Mäntyluoto harbor.

Two bridges span the river 1.5 miles E of the breakwaters.

A conspicuous chimney stands on the W side of the harbor at Tahkoluoto.

Pilotage.—Pilotage is compulsory. Vessels should send a request for pilotage and an ETA 24 hours prior to arrival. The pilot station provides pilots for Mäntyluoto, Tahkoluoto, and Reposaari.

Pilots can be contacted on VHF channel 13 and board about 4.3 miles WSW of Morris Lighted Beacon. Vessels bound for Tahkoluoto are boarded about 1.2 miles WNW of Porin Majakka Light (61°42'N., 21°14'E.).

The request for pilotage message should include the following information:

Designator	Information Required
A	Name, call sign, and flag.
B	Time (date and time - 6 digits).
G	Last port of call.
I	Destination and ETA.
O	Draft (maximum).
P	Cargo and brief details of any dangerous cargo or harmful substances.
Q	Brief details of any defects.

Regulations.—The West Coast Vessel Traffic Service (VTS) system operates in this area and is divided into two sectors. This system, which is mandatory, is managed by the West Coast VTS Center at Mäntyluoto.

Pori VTS Sector extends N from latitude 61°22'N to the vicinity of Kaijakari (61°37'N., 21°22'E.) and includes the harbors of Mäntyluoto, Tahkoluoto, and Merikarvia.

Rauma VTS Sector extends S from latitude 61°22'N to the vicinity of Rauman Majakka Light (61°09'N., 21°10'E.) and includes the harbors of Rauma, Olkiluoto, and Eurajoki.

All domestic and foreign merchant and state vessels within the VTS area shall maintain a continuous listening watch on VHF channel 9. Such vessels shall also report to the West Coast VTS Center on VHF channel 9 using the following format:

Designator	Information Required
A	Name, call sign, and flag.
B	Time (date and time - 6 digits).
C	Position (4-digit latitude plus N and 5-digit longitude plus E).
D	Position (3-digit true bearing and distance in miles from landmark).
E	True course (3 digits).
F	Speed in knots and tenths (3 digits).
G	Last port of call.

Designator	Information Required
I	Destination and ETA.
L	Route (intended track).
O	Maximum draft (meters and centimeters - 4 digits).
P	Cargo and brief details of any dangerous cargo or harmful substances.
Q	Brief details of any defects, damage, or deficiencies.
U	Vessel size and type.

Vessels must send an Advance Report 2 hours prior to entering the VTS area. This report should include the information for designators A, B, C, E, F, I, L, O, P, Q, and U.

Vessels must send an Entry Report when entering the VTS area. This report should include the information for designators A, D, E, and F.

Vessels must send a Movement Report when 12 miles before passing Kaijakari, 12 miles before passing Rauman Majakka Light, or when passing Kalla (61°17'N., 21°22'E.). The report must include vessel name, position, destination, and fairway being used.

Vessels anchoring or berthing within the VTS area must report and provide the information in designators A, B, and D.

A Navigation Assistance Service is available and is recommended during reduced visibility or in the case of navigation deficiencies. This service is available on request or if the VTS Center considers it necessary.

Anchorage.—Anchorage may taken, in a depth of 7m, mud, in an area lying 0.3 mile E of the SE end of Reposaari. However, strong winds from SW to W cause heavy seas in this roadstead.

Caution.—Anchorage is prohibited within an area, which may best be seen on the chart, lying close E of the breakwater heads due to the existence of submarine pipelines and cables.

A spoil ground area, which may best be seen on the chart, lies close NW of Tahkoluoto.

A dangerous wreck is reported to lie close SE of the main approach channel in the vicinity of Morris Lighted Beacon.

7.14 The coast between Mantyluoto (Pori) and Kristinestad, about 40 miles N, is fronted by numerous islands, rocks, and shoals, which may best be seen on the chart. These dangers extend up to about 9 miles seaward in places. Only the outer dangers and significant landmarks are described below.

Fadikari (61°44'N., 21°18'E.), a shoal patch, lies near the outer edge of the coastal bank, 2.3 miles ENE of Porin Majakka Light. It has a depth of 4.8m and is marked by a buoy.

Karviankivi, a pinnacle rock with a depth of 6.3m, lies 5.5 miles NNW of Fadikari. It is located near the outer edge of the coastal bank and marked by a buoy.

Stakki (61°51'N., 21°18'E.) is the westernmost of a group of islets lying centered from 2 to 5 miles offshore, 8.5 miles NE of Porin Majakka Light. Shoals, with depths of less than 5m, extend up to about 2.5 miles WSW and 1.5 miles W of this islet. A prominent pyramid beacon, 14m high, stands on an islet lying at the S end of the group.

Hiidensilta, an extensive area of shallow shoals, lies centered 2.5 mile NW of Stakki. A patch, with a depth of 4.5m, is located at the seaward edge of this area. It lies about 4.3 miles WNW of Stakki and is marked by a buoy.

An isolated shoal patch, with a depth of 9.4m, lies about 6 miles WNW of Stakki and is the outermost danger in this vicinity.



Merikarvian Majakka Light

Merikarvian Majakka Light (61°56'N., 21°17'E.), equipped with a racon, is shown from a mast standing on the N part of Hiidensilta, 5.6 miles NNW of Stakki.

Yttergrund Light (61°59'N., 21°18'E.) is shown from a prominent tower, 41m high, standing on an island lying close off the mainland, 3 miles NNE of Merikarvian Majakka Light.

Silverberggrund, a shoal with a depth of 3.9m, lies about 2 miles WSW of Yttergrund Light.

Rakaren, a large shoal, lies centered 5.5 miles NW of Yttergrund Light, near the edge of the shallow coastal bank. It has a least depth of 0.8m and is marked by two buoys.

7.15 Merikarvia (61°51'N., 21°29'E.), a small mainland harbor, is situated 5 miles E of Stakki and sheltered by Brando, an island lying close offshore. It is used by coasters and recreational craft. A quay, which fronts a sawmill, can handle vessels up to 115m in length.

A main approach route, which is authorized for drafts up to 4.5m, leads E for about 3.5 miles from a position located 3 miles WNW of Merikarvian Majakka Light. The route passes N of the light and then leads SE for about 8 miles to the harbor. The channel is indicated by lighted ranges and marked by buoys. Local knowledge is required.

Small vessels can anchor, in a depth of 10m, within an outer roadstead lying about 2.5 miles NW of Brando.

Kassala (61°57'N., 21°21'E.), a small fishing harbor, lies 6.5 miles NNW of Merikarvia. It can be entered through a partly buoyed channel, which is authorized for drafts up to 3.3m. This channel branches NNE from the main route leading to Meri-



Yttergrund Light

karvia at a position about 1.2 miles SE of Merikarvian Majakka Light.

Sideby (Siipyy) (62°02'N., 21°20'E.), a small town, is situated about 3.5 miles NNE of Yttergrund Light. It may be identified by a conspicuous yellow church, with a black roof and steeple, standing at an elevation of 61m.

7.16 Kristiinankaupungin Majakka Light (62°12'N., 21°10'E.), equipped with a racon, is shown from a prominent tower with a helicopter platform, 20m high, standing in the approach to Kristinestad, about 14 miles NNW of Yttergrund Light.

Hojiers, a shoal with a least depth of 3.9m, lies centered 5.5 miles SSW of Kristiinankaupungin Majakka Light. It is located about 5 miles offshore and marked by two buoys.

Mossbada, a large shoal area with a least depth of 2.3m, lies centered 3 miles N of Kristiinankaupungin Majakka Light. It is located 5 miles offshore, at the outer edge of the coastal bank, and is marked by buoys.

Harkmeri (62°12'N., 21°20'E.) is an islet lying 4.3 miles ESE of Kristiinankaupungin Majakka Light, in the approach to Kristinestad. A conspicuous pyramid beacon, 19m high with a ball topmark, stands on the N end of this islet.

Norra Storbadan (62°12'N., 21°20'E.), a rocky and shallow shoal, lies 2.5 miles ENE of Kristiinankaupungin Majakka Light and is marked by a prominent lighted beacon. Its N end is marked by a buoy.

Phavuori (Botomsberg) (62°17'N., 21°39'E.), a hill 130m high, stands 7.5 miles E of Kristinestad and is a conspicuous landmark. It is the only high land in this vicinity and appears as three separate hills from a distance of about 20 miles. An aeronautical light is shown from a mast standing on the SE side of the middle hill.

Kristinestad (Kristiinankaupunki) (62°17'N., 21°24'E.)

World Port Index No. 27680

7.17 Kristinestad is situated at the head of Stads Fjard, a small and narrow inlet. It is fronted by numerous small islets and rocks. The inner harbor lies within the inlet at the E side of the Bjornon peninsula. The outer harbor lies at the W side of the peninsula, about 1.8 miles SW of the town center.

Winds—Weather.—The outer roadstead is protected from winds from all directions except those from SSW; however, these winds do not raise a heavy sea. The inner harbor is well-protected from all directions.

Ice.—Depending on the ice, the port usually closes at the end of December and reopens during April. The outer harbor may be kept open for a longer period.

Depths—Limitations.—The main approach route leading to the inner harbor from seaward is authorized for drafts up to 5m. This route leads in an ENE direction for 4.7 miles from a position located 2.3 miles S of Kristiinankaupungin Majakka Light (62°12'N., 21°10'E.). It then continues NNE for 1.5 miles and N for 2.3 miles to the harbor entrance. This route passes close N of the islet of Harkmeri.

An alternate route, which is authorized for drafts up to 5m, may only be used by day. This route leads SE for 3.5 miles from a position located 2.5 miles NNW of Kristiinankaupungin Majakka Light. It passes close S of Mossbada shoal and close NE of Norra Storbadan Lighted Beacon. The route then continues SSE to join the main channel.

The inner harbor has a wooden quay, 75m long, with a depth of 4.6m alongside, and a stone quay, 250m long, with a depth of 5.6m alongside. Vessels up to 130m in length and 5m draft can be accommodated.

The main approach route leading to the outer harbor from seaward is authorized for drafts up to 12m. This route leads in a NE direction for 6 miles from a position located 2 miles SW of Kristiinankaupungin Majakka Light. It passes close NW of the latter light and close NW of Norra Storbadan Lighted Beacon.

The outer harbor has a T-shaped coal pier, with a depth of 12m alongside, and a T-shaped oil jetty, with a depth of 10m alongside. Bulk vessels up to 240m in length and 12m draft can be accommodated; and tankers up to 23,000 dwt can be handled.

Aspect.—The approach routes are indicated by lighted ranges and beacons. The inner channels are marked by buoys and beacons.

Pilotage.—Pilotage is compulsory. Pilots, which are provided by Vassa, may be contacted by VHF and board about 2 miles SW of Kristiinankaupungin Majakka Light (62°12'N., 21°10'E.). Vessels should send an ETA and request for pilotage to Vassa at least 6 hours in advance and a confirmation 3 hours before arrival. The port can be contacted on VHF channel 24.

Regulations.—The approach route leading to Kristinestad (Kristiinankaupunki) is situated within Sector A of the Bothnia Vessel Traffic Service (VTS) system. This system operates off the NW coast of Finland and is mandatory. For further details of the VTS system, including reporting procedures, see [paragraph 10.1](#).

Anchorage.—Anchorage, with good shelter and good holding ground, is available, in a depth of 9m, mud, about 1.5 miles S of the inner harbor entrance.

7.18 The coast between Kristinestad and Strommingsbadan (62°59'N., 20°45'E.), about 42 miles N, is fronted by numerous islands, rocks, and shoals, which may best be seen on the chart. These dangers extend up to about 17 miles seaward in places. Only the outer dangers and significant landmarks are described below.

Salgrund Light (62°20'N., 21°12'E.) is shown from a prominent tower, 25m high, standing at the SW end of an island of the same name.

Storremmargrund Light (62°20'N., 21°13'E.), equipped with a racon, is shown from a floodlit tower, 7m high, standing 0.7 mile E of Salgrund Light.

Storgrund (62°19'N., 21°05'E.), one of the outermost dangers in this vicinity, lies 3.5 miles WSW of Salgrund Light. This shoal has a least depth of 3.4m and is marked by two buoys. A detached patch, with a least depth of 7.2m, lies about 1.6 miles WNW of Storgrund.

Yttergrund, another of the outermost dangers in this vicinity, lies about 5 miles offshore, 6.5 miles NW of Salgrund Light. This rocky shoal has a least depth of 4.9m and is marked by a buoy.

Caution.—A local magnetic anomaly exists within the area extending 2 miles W and 4 miles SW of Strommingsbadan.

7.19 Kasko (Kaskinen) (62°23'N., 21°14'E.) ([World Port Index No. 27670](#)) is situated on the W side of the island of Kasko, about 8 miles NW of Kristinestad. This small port consists of a natural harbor lying between the islands of Kasko and Esko (Eskilso), close W of the town.

Winds—Weather.—The harbor is well-sheltered from all winds.

Ice.—During the winter this port is usually the northernmost within the Gulf of Bothnia to be kept open by icebreakers.

Depths—Limitations.—The main approach route leads NE for about 4 miles from a position located 5 miles SW of Salgrund Light. The entrance channel then leads in a N direction between Salgrund Light and Storremmargrund Light. The route is authorized for drafts up to 9m as far as the Deep Water Quay and then for drafts up to 7.2 as far as the Inner Harbour Quay.

Deep Water Quay is 250m long and has depths of 8 to 10m alongside. Outer Harbour Quay is 35m long and has a depth of 6.5m alongside. Inner Harbour Quay is 160m long and has a depth of 6m alongside. Vessels up to 185m in length and 9m draft can be handled.

Aspect.—The approach and entrance channels are indicated by lighted ranges and marked by buoys.

Pilotage.—Pilotage is compulsory. Pilots can be contacted by VHF and board about 5.5 miles SW of Salgrund Light. They are provided by the station at Vaasa.

Regulations.—The approach route leading to Kasko (Kaskinen) is situated within Sector A of the Bothnia Vessel Traffic Service (VTS) system. This system operates off the NW coast of Finland and is mandatory. For further details of the VTS system, including reporting procedures, see [paragraph 10.1](#).

Anchorage.—Anchorage is available, in depths of 15 to 20m, within an area lying about 3 miles WSW of Salgrund. Anchorage may also be obtained, in a depth of 5m, clay, within the harbor, off the middle of the town.

7.20 Gashallan (62°35'N., 21°03'E.) is the westernmost of a group of islets lying about 3 miles offshore, 15 miles NNW of Salgrund Light. A red and white, two-story former pilot watch house stands on this islet. It is 11m high and conspicuous from seaward.

Shoals, with depths of less than 5m, extend up to about 2.5 miles SW, W, and NW of Gashallan. A detached patch, with a depth of 9.8m, lies about 3.5 miles W of Gashallan.

Skomakarsgrund, with a depth of 3.7m, and Rosengrund, with a depth of 4m, lie, respectively, about 5.5 and 4.2 miles S of Gashallan. These shoals lie about 3 miles offshore and are marked by buoys.

Judasternarne (62°40'N., 20°45'E.), with a least depth of 2.5m, lies 9 miles offshore, about 10 miles NW of Gashallan, and is marked by a buoy. A lighted buoy is moored about 1.3 miles NW of this shoal.

Eriksson, a large shoal area, lies centered 2.5 miles E of Judasternarne. It has a least depth of 1.9m and is marked by three buoys. A shoal area, with depths of 8.3 to 9.8m, lies centered 1.7 miles SE of Judasternarne.

7.21 Sjogrund (62°47'N., 20°32'E.), with a least depth of 8.2m, lies 9 miles NW of Judasternarne and is marked by a buoy. This shoal is located 16.5 miles W of the mainland and is the outermost danger in along this stretch of coast.



Strommingsbadan Light

Storkallegrund, an extensive shoal flat, lies with its outer part located 9 miles N of Judasternarne, about halfway between Sjogrund and the mainland.

Strommingsbadan (62°59'N., 20°45'E.) is a small islet lying 18.5 miles N of Judasternarne. Above-water rocks lie 1 mile S and 1.2 miles SSE of this islet.

A main light is shown from a prominent tower, 13m high, standing on this islet.

Vesterhallan, a rock, lies about 0.5 mile WSW of the light. It has a least depth of 5.5m and is marked by a buoy. Karpoff, a shoal, lies about 1.5 miles SSW of the light. It has a least depth of 2.3m and is marked by a buoy.

Strommingsbadan lies near the NW edge of a shoal, with a least depth of 2.5m, which extends for about 2.3 miles in a general N-S direction and is nearly joined to another shoal,

with a least depth of about 2.4m, which extends N for an additional 1.5 miles.

A description of the waters lying N of Strommingsbadan, begins in [paragraph 8.11](#).